

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
RICHMOND DIVISION**

THE TRUSTEES OF COLUMBIA
UNIVERSITY IN THE CITY OF NEW
YORK,

Plaintiff

v.

NORTONLIFELOCK INC.,

Defendant.

Civil Action No. 3:13-cv-00808-MHL

**MEMORANDUM IN SUPPORT OF DEFENDANT NORTONLIFELOCK'S RENEWED
MOTION FOR JUDGMENT AS A MATTER OF LAW**

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I. INTRODUCTION

Pursuant to Federal Rule of Civil Procedure 50(b), Defendant NortonLifeLock, Inc. (“Norton”) respectfully moves for judgment as a matter of law (“JMOL”) because Plaintiff, The Trustees of the University of Columbia in the City of New York (“Columbia”), failed to present sufficient evidence to permit a reasonable jury to return a verdict in its favor on any of its claims.

Specifically, Columbia did not present sufficient evidence of: direct or literal infringement of claim 2 of U.S. Patent No. 8,074,115 (“’115 patent”) and claims 2, 11, and 27 of U.S. Patent No. 8,601,322 (“’322 patent”) (collectively, “Asserted Claims”); induced or contributory infringement of claims 2, 11, and 27 of the ’322 patent; willful infringement; or damages.

II. LEGAL STANDARD

Judgment under Rule 50(b) is required where plaintiff fails to present substantial evidence to support a jury verdict in its favor. *See* Fed. R. Civ. P. 50(b); *Konkel v. Bob Evans Farms*, 165 F.3d 275, 279 (4th Cir. 1999). Judgment as matter of law is appropriate “[i]f a party has been fully heard on an issue during a jury trial and the court finds that a reasonable jury would not have a legally sufficient evidentiary basis to find for the party on that issue.” Fed. R. Civ. P. 50(a)(1). On a motion for judgment as a matter of law, while the Court “must draw all reasonable inferences in favor of the nonmoving party, and [] may not make credibility determinations or weigh the evidence,” the Court “should review all of the evidence in the record” and “give credence to the evidence . . . supporting the moving party that is uncontradicted and unimpeached.” *Reeves v. Sanderson Plumbing Prods., Inc.*, 530 U.S. 133, 150-51 (2000) (citations omitted). A “scintilla” of evidence cannot preclude judgment as a matter of law; “[t]he question is not whether there is literally no evidence supporting the party against whom the motion is directed but whether there is evidence upon which the jury might reasonably find a verdict for that party.” 9B Charles Alan Wright & Arthur R. Miller, *Federal Practice & Procedure* § 2524 (3d ed. 2011); *Persinger v.*

Norfolk & W. Ry. Co., 920 F.2d 1185, 1187 (4th Cir. 1990); *Whitserve, LLC v. Computer Packages, Inc.*, 694 F.3d 10, 24 (Fed. Cir. 2012) (“[G]eneral and conclusory testimony” by experts “is not enough to be even substantial evidence in support of a verdict.”).

III. ARGUMENT

A. The Court Should Grant Judgment As A Matter Of Law On Columbia’s Direct Infringement Claims

To determine that Norton directly infringes the ’115 and ’322 patents, the jury needed a legally sufficient evidentiary basis to find that the Accused Products practice each element of the asserted patent claims. *See* Fed. R. Civ. P. 50(a)(1); *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454 (Fed. Cir. 1998) (en banc), *abrogated on other grounds in Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335 (Fed. Cir. 2015). No such basis exists, and the Court should grant judgment as a matter of law.

SONAR/BASH is the only component of the Accused Products that Columbia claimed infringed the asserted claims.¹ *See e.g.*, Trial Tr. at 1021:22-25, 1267:11-16. No reasonable jury could have found that SONAR/BASH practices each element of the asserted claims.

1. The ’322 Patent

Columbia failed to establish a sufficient evidentiary basis to prove the Accused Products practice each element of claim 2, 11, or 27 of the ’322 patent. These claims all contain the elements of “executing at least a portion of a program in an emulator” and “comparing a function call made

¹ The Accused Products are: Norton Antivirus version 2010/17.0 and later; Norton Internet Security version 2010/17.0 and later; Norton 360 version 4.0 and later; Norton Security; Norton Security with Backup; Norton Security Standard; Norton Security Deluxe; Norton Security Premium; Norton Antivirus Basic; Norton Security Deluxe with LifeLock; Norton Antivirus Plus; Norton 360 Standard; Norton 360 Deluxe; Norton 360 with LifeLock; Symantec Endpoint Protection 12.1; Symantec Endpoint Protection 14; and Symantec Endpoint Protection 15 (also called “enterprise products”). The Accused Products contain many components and antivirus-related systems.

in the emulator” to a model of function calls, “wherein the model is a combined model created from at least two models created using different computers.” *Id.* at 1003:7-1004:3. The evidence at trial showed that the Accused Products do not practice these claim elements.

a. Programs and Function Calls Are Not Executed or Made in an Emulator as Required by the Asserted Claims

Each asserted claim of the ’322 patent requires “executing at least a portion of a program in an emulator,” and comparing “a function call made in the emulator.” PX-831; Trial Tr. at 1003:2-1004:3. The Court construed “emulator” to mean “software, alone or in combination with hardware, that permits the monitoring and selective execution of certain parts, or all, of a program.” Dkt. 123 at 2. So, in order to infringe under the Court’s construction,² 1) an emulator must permit monitoring and selective execution of certain parts, or all, of a program and 2) at least a portion of a program must be executed in the emulator, and a function call must be made in the emulator.

Dr. Bailey’s infringement theory requires SONAR/BASH to be the alleged emulator. Columbia’s expert, Dr. Bailey, conceded that the SONAR/BASH component of the Accused Products is what permits the monitoring and selective execution of a program. Trial Tr. at 1021:22-25 (Q: “Is the SONAR/BASH component of the accused product the component you believe infringes the asserted claims?” A: “Yes.”), 1043:8-9 (Q: “Does BASH monitor function calls?” A: “It does”), 1047:18-23, 1055:3-14, 1061:3-6 (Q: “Does BASH permit selective execution of a running program?” A: “It does.”), 1066:17-23, 1069:23-25 (Q: “Is it SONAR/BASH that’s permitting the program to either run or not to run? A: “That’s correct.”), 1272:24-1273:4. On direct examination, Dr. Bailey was asked whether “SONAR/BASH [is] the component that permits

² Norton continues to reserve its objections to this claim construction.

monitoring and selective execution.” *Id.* at 1058:2-5. His response was that “[w]ithout SONAR/BASH installed, we don’t have the ability to monitor or selectively execute.” *Id.*

Because SONAR/BASH is the only accused component that permits monitoring and selective execution, it must be the alleged emulator. Dr. Bailey and Columbia originally admitted that SONAR/BASH is the alleged “emulator” (*id.* at 1274:19-1282:3), then recognized the fatal flaw this invoked in their infringement theory, and shifted their theory, arguing that the emulator is instead the computing “operating environment” in which SONAR/BASH is installed. *Id.* at 1272:2-1283:18. That argument fails because Columbia presented *no* evidence, let alone substantial evidence, that the operating environment has anything to do with monitoring and selective execution of a program (it does not). Nor did Columbia present any evidence that Norton makes or sells an operating environment, such as Microsoft Windows. *See id.* at 1051:25-1052:8. Thus, the operating environment is not part of an “emulator” as construed by the Court.

Programs do not execute or run function calls in SONAR/BASH. Because SONAR/BASH is necessarily the alleged emulator, infringement requires that at least a portion of a program execute *in* SONAR/BASH and that function calls be made *in* SONAR/BASH. Both parties’ witnesses agree that this never happens. Dr. Bailey could not have been more clear on this point, admitting: “***there’s no program that can run in SONAR/BASH.*** And that’s never been true.” *Id.* at 1282:23-1283:6 (emphasis added); *see also id.* at 1274:18 (Dr. Bailey further testifying that “the program doesn’t run in SONAR/BASH”).

The architect of SONAR/BASH, David Kane, and Norton’s expert, Dr. Jaeger, likewise testified that programs do not execute or run in SONAR/BASH and function calls are not made in SONAR/BASH. Trial Tr. at 2035:5-21 (Kane Tr.), 2070:3-13; *see also id.* at 2070:17-2071:7 (Dr. Jaeger testifying that “Dr. Bailey agrees with me that the program does not run in

SONAR/BASH”). Because the component of the Accused Products that allegedly “permits monitoring and selective execution”—SONAR/BASH—does not execute “at least a part of a program” or run any function calls, the Accused Products do not infringe claims 2, 11, or 27 of the ’322 patent. *Id.* at 2071:12-15; *see CommScope Techs. LLC v. Dali Wireless Inc.*, 10 F.4th 1289, 1297 (Fed. Cir. 2021) (reversing denial of JMOL of no literal infringement where, “[n]ot only was there a lack of evidence to show that the accused product met the proper construction of the claims, there is un rebutted evidence showing the opposite”).

b. BASH Submissions Are Not “Models” and the BASH Decision Tree Is Not a “Combined Model” as Required by the Asserted Claims

Columbia also failed to provide substantial evidence for the jury to conclude that BASH submissions are “models” and that the BASH decision tree is a “combined model.” The asserted claims require “comparing a function call made in the emulator to a model of function calls for the at least a portion of the program, wherein the model is a combined model created from at least two models created using different computers.” PX-831. The claims thus require combining at least two models to create a combined model of function calls.

In contrast, the alleged model of function calls in SONAR/BASH is not created by combining two models. Columbia and Dr. Bailey point to SONAR/BASH’s decision tree as a model used to compare function calls. Trial Tr. at 1142:5-21. But as Mr. Kane—the person most knowledgeable about SONAR/BASH (*id.* at 1940:25-1941:2)—testified, SONAR/BASH’s “decision tree is not a combination of models.” *Id.* at 1969:12-18. Simply said, the SONAR/BASH decision tree was not a product of “combining an all good or valid decision tree with an all bad or malicious decision tree,” as Columbia alleges, or of combining any other models together to form a unified model. *Id.* at 1969:12-18, 1973:2-6.

Dr. Bailey pointed to BASH submissions, which consist only of factual data, as the alleged “at least two models created using different computers.” *Id.* at 1286:6-13. But as confirmed by David Kane, BASH submissions contain certain facts or “attributes” about programs, but are not models that are combined together. *Id.* at 1960:2-8. Submissions are the output of what SONAR/BASH’s lone model—the SONAR/BASH decision tree—spits out upon analyzing a program. *Id.* at 1964:23-1965:2. In other words, submissions are mere data, not “*models*.” These submissions are sent to a server now owned by Broadcom but are never used as models to be compared against function calls. *Id.* at 1966:10-12. Mr. Kane further confirmed that SONAR/BASH submissions are not models because the submissions are just “facts about the program.” *Id.* at 1960:2-8; *see also id.* at 2080:13-19 (Dr. Jaeger confirming a submission “is basically data about a specific program execution”). Not surprisingly, in all the years Mr. Kane worked on SONAR/BASH, nobody has ever called BASH submissions “models.” *Id.* at 1960:9-21. Dr. Bailey admitted that he did not identify any documents, testimony, or source code from Norton that called a BASH submission a “submission model” or as containing a “submission model.” *Id.* at 1287:21-1289:10, 1290:7-13.

For good reason. As Dr. Bailey admitted, the BASH submissions are training data used to train the BASH decision tree. *See* Trial Tr. at 1304:8-12 (Q: “So when the data from the submissions is being fed into the machine-learning algorithm, it’s training data, isn’t it?” A: “It’s the input into the learning algorithm. So, yeah, we can refer to input as training data.”).

Ignoring this, Dr. Bailey relied on an extrinsic dictionary definition to improperly define “model” as “a representation of a system or a process,” in an attempt to sweep in training data like BASH submissions. *Id.* at 1079:10-1082:4. That definition contradicts the Columbia patents’ plain disclosures. Although the Court did not construe “model,” and instructed that it be given its

plain and ordinary meaning, as the Federal Circuit has said, “[g]iving a term its plain and ordinary meaning does not leave the term devoid of any meaning whatsoever. Instead, the ordinary meaning of a claim term is its meaning to the ordinary artisan **after reading the entire patent.**” *Wisconsin Alumni Rsch. Found. v. Apple Inc.*, 905 F.3d 1341, 1348 (Fed. Cir. 2018) (emphasis added) (internal citations and quotations omitted) (reversing denial of JMOL of no infringement, because no jury could find that the ordinary meaning of a term in the context of the patent was satisfied by the accused products). Columbia and its expert, Dr. Bailey, violated this black-letter tenet by ignoring the specification’s description of models and training data as *different things*.

Specifically, the ordinary meaning of “model” **cannot** encompass training data in light of the patents’ description of two separate and *different* approaches to creating or updating models. One approach is the “use of ‘incremental learning algorithms,’ which are algorithms that piecemeal update their models with ***new data***.” PX-831 at 8:7-11 (emphasis added). BASH submissions are exactly this “new data”—as noted above, submissions are fed into the machine learning algorithm to train the SONAR/BASH decision tree. *See* Trial Tr. at 1304:8-12. This is contrasted in the Columbia patents with a second, “alternative,” approach in which “multiple models such as described above may be combined.” PX-831 at 8:22-27. As these passages from the Columbia patents make clear, combining models is a different and alternative approach to supplying training data to a learning algorithm. *Id.* The evidence at trial established that Norton used only the first approach—feeding submissions as training data to the decision tree algorithm—but the asserted claims require the second combined model approach instead, and this approach is never used in

SONAR/BASH. *Id.*, claim 2. This dooms Columbia’s infringement theory and militates for judgment as a matter of law.³

Mr. Kane and Dr. Jaeger further confirmed that the SONAR/BASH submissions are training data, not models. *See* Trial Tr. at 1966:13-1967:1 (Mr. Kane testifying that BASH submissions are used to “train the tree”); *id.* at 2083:8-15 (Dr. Jaeger testifying to the same). Norton’s internal documents also describe submissions as training data. PX-398 at 1 (explaining that submissions contain data that “is used to train new classifiers [for the decision tree]”). In other words, as Dr. Jaeger explained using an analogy to a model of weather forecasting, while “the decision tree enables you to make judgments,” such as what the weather is predicted to be on any given day, submissions are “a specific state of the weather currently,” such as the current temperature. Trial Tr. at 2081:12-2082:7. Although Dr. Bailey argued that submissions were also “models,” that testimony is belied by his admissions that submissions are actually training data (*id.* at 1304:8-12), which cannot be squared with the ’322 patent’s distinction between models and training data.

Dr. Bailey’s infringement theory that the BASH decision tree is a combined model was heavily premised on a mischaracterization of Mr. Pereira’s deposition testimony. On cross-examination, however, Dr. Bailey conceded that Mr. Pereira did not say that the decision tree was created from the combination of two models, and conceded that he was reading that in for Mr. Pereira. *Id.* at 1292:18-1293:4. In parts of Mr. Pereira’s deposition testimony that Columbia

³ Dr. Jaeger was prepared to rebut Dr. Bailey’s improper definition by pointing to the specification of the Columbia patents as making the clear the plain meaning of this term as read in the context of the patents, as it must be, but the Court precluded Dr. Jaeger from doing so. Trial Tr. at 2047:8-2049:12. Thus, Dr. Bailey was allowed, in un rebutted fashion, to cite a dictionary definition for the ordinary meaning of “model” divorced from the Columbia patents’ disclosure and so not based on the meaning a person of ordinary skill in the art would give the term “after reading the entire patent.” This was error. *See Wisconsin Alumni*, 905 F.3d at 1348.

omitted from Dr. Bailey's direct examination, Mr. Pereira testified that while *Columbia* incorrectly asked him to "*assume* [Norton was] creating models of valid and malicious," SONAR/BASH does not actually work in this way. Pereira Dep. Tr. at 250:7-22 (emphasis added); Trial Tr. at 2084:3-20. Mr. Pereira testified that Norton takes good and bad information as training data and "spits out this single tree," which is the one and only model used in SONAR/BASH. Pereira Dep. Tr. 301:2-18; Trial Tr. at 2222:14-2223:24 (Dr. Jaeger discussing Mr. Pereira's testimony). These facts are undisputed, and show that SONAR/BASH has a single model that is not formed by combining other models; consequently the Accused Products cannot satisfy the step of "creating a combined model from at least two models created using different computers," and do not infringe any of claims 2, 11, and 27 of the '322 patent. Trial Tr. at 2087:17-20.

2. The '115 Patent

Columbia also failed to establish a sufficient evidentiary basis to prove that the Accused Products practice each limitation of claim 2 of the '115 patent. Because that claim includes substantively the same limitations as the '322 patent of "executing at least a portion of a program in an emulator," running function calls "in an emulator," and the "combined model" being created "from at least two models created using different computers," Norton does not infringe the '115 patent for the same reasons as for the '322 patent.

Norton does not infringe claim 2 of the '115 patent for an additional and independent reason. That claim requires that "upon identifying the anomalous function call, notifying an application community that includes a plurality of computers of the anomalous function call." PX-830. Once again, the undisputed facts, including Dr. Bailey's testimony, show that the Accused Products do not practice this limitation. Dr. Bailey identified the BASH decision tree shipped to customers within SONAR/BASH as meeting this limitation (Trial Tr. at 1243:10-14), but his argument fails on two independent grounds.

First, the SONAR/BASH decision tree never notifies an application community about an anomalous function call. *Id.* at 1974:16-25. If SONAR/BASH’s decision tree identifies a function call as anomalous, it will create and send a submission to the server, but that submission is never sent to “an application community,” here a set of customers or customers’ computers. *Id.* at 1241:7-15; 2090:9-16. No customer computer is ever made aware of any particular anomalous function call from some other customer computer via a submission (or any other means). *Id.* at 2092:14-22. Dr. Bailey admitted that the plain and ordinary meaning of “notify” was to “report” or “make aware” (*id.* at 1305:24-1306:2), and that he had no evidence of any such notification to SONAR/BASH customers about a specific anomalous function call. *Id.* at 1311:5-12 (admitting he had no evidence “that there’s some report or notification that Norton sends out to every one of its customers that says the decision tree” of any particular customer “found that this function call in this context is a bad one”). Dr. Bailey also testified that notifying customers about specific anomalous function calls, as required by the asserted claim, was “not commercially feasible” and even “made fun of such an idea.” *Id.* at 1311:5-16. But the claims require this, and Columbia’s failure to provide *any* evidence that this occurs compels a finding of noninfringement.

Second, even if one incorrectly assumed that the BASH decision tree is somehow a notification of an anomalous function call, this alleged notification does not happen “***upon identifying*** the anomalous function call” as the claims require. The Court did not construe “upon identifying,” but the plain and ordinary meaning of that phrase requires at least a contemporaneous notification of the detection. *Id.* at 2089:24-2090:4 (Dr. Jaeger: “that there may not be immediate, but there should be a prompt notification that, hey, something’s happened, and then the notification goes out.”). As Dr. Bailey admitted, the last iteration of the BASH decision tree was sent out five years ago and the Accused Products “haven’t performed that kind of notification since then.” *Id.*

at 1307:23-1308:7. And even when Norton did update decision trees, it did so only roughly every six months, not “contemporaneously with the identification of a particular anomalous function call.” *Id.* at 1307:11-19, 1310:24-1311:4.⁴ No reasonable jury could conclude that the Accused Products perform the limitation of claim 2 of the ’115 patent requiring “upon identifying the anomalous function call, notifying an application community that includes a plurality of computers of the anomalous function call.”

For these reasons, no reasonable jury could have found that SONAR/BASH literally infringes the Asserted Claims.

B. The Court Should Grant Judgment As A Matter Of Law On Columbia’s Induced Infringement Claims

The jury determined that Norton induced its customers to infringe claims 2, 11, and 27 of the ’322 patent. Dkt. 1206 at 2. But based on the record evidence, no reasonable jury could have concluded that Norton induced infringement of the ’322 patent, for three separate and independent reasons.

First, the Supreme Court has expressly held “that inducement liability may arise ‘if, but only if, [there is] . . . direct infringement.’” *Limelight Networks, Inc. v. Akamai Tech., Inc.*, 572 U.S. 915, 921 (2014). Because there is insufficient evidence of direct infringement, *supra* at Section III.A, there is insufficient evidence to establish inducement.

Second, “liability for induced infringement ‘requires knowledge that the induced acts constitute patent infringement,’” *ZUP, LLC v. Nash Mfg., Inc.*, 229 F. Supp. 3d 430, 454 (E.D. Va. 2017), *aff’d*, 896 F.3d 1365 (Fed. Cir. 2018) (quoting *Global-Tech Appliances, Inc. v. SEB S.A.*,

⁴ Dr. Bailey’s willingness to testify that the remedial step of hammering a nail into a wall five years after it was detected would somehow be a “notification” that occurred “upon detecting” the nail, proves that Columbia’s infringement theory fails as a matter of common sense and plain meaning. *Id.* at 1310:11-23.

563 U.S. 754, 766 (2011)), as well as proof of “specific intent and action to induce infringement.” *Id.* (citation omitted); *see also Roche Diagnostics Corp. v. Meso Scale Diagnostics, LLC*, 30 F.4th 1109, 1117-19 (Fed. Cir. 2022). The record contains no evidence whatsoever that Norton “knowingly induced infringement and possessed specific intent to encourage another’s infringement.” *DSU Med. Corp. v. JMS Co.*, 471 F.3d 1293, 1306 (Fed. Cir. 2006) (citation omitted). Indeed, there is no evidence on which a reasonable jury could determine that Norton either (1) knew that its customers infringe the ’322 patent, or (2) specifically intended to encourage that infringement. There is also no evidence that Norton was willfully blind, a high standard that requires the alleged inducer to (1) “subjectively believe that there is a high probability that a fact exists” and (2) “take deliberate actions to avoid learning of that fact.” *Global-Tech*, 563 U.S. at 769. The record instead reflects Norton’s unwavering belief that it does not infringe and did not induce infringement by anyone else. *See, e.g.*, Dkt. 20 at 28; Jaeger Opening Report (Oct. 17, 2014), Rebuttal Report (Oct. 10, 2019), and Supplemental Report (Jan. 13, 2020); Section III.A.

Norton did not know of, nor was it blind to, the ’322 patent before Columbia sued. It could not have been because the ’322 patent did not issue until after Columbia sued. And before it sued, Columbia neither disclosed the ’322 patent application to Norton (despite multiple communications), let alone accuse Norton of infringing its pending claims. No evidence suggests Norton even *knew* about the ’322 patent application and its pending claims prior to suit. Of course, Norton could not have knowledge or be willfully blind to the ’322 patent *years before* it issued. *See, e.g.*, PX-831 at 1 (showing issue date of December 3, 2013 for the ’322 patent); PX-83 (2005 email generally describing “Application Communities”), PX-776 (2006 email regarding same). This is especially true given Columbia provided no more than conclusory statements that technical

descriptions in pre-issuance documents aligned with the scope of the asserted claims of the '322 patent. *See, e.g.*, PX-83, PX-777; Trial Tr. at 585:3-586:17, 624:25-630:22.

The only time Columbia identified a related patent was in August 14, 2012, when Columbia offered Norton an “exciting opportunity” to open “a discussion regarding these and other groundbreaking technologies at Columbia University.” Trial Tr. at 395:24-396:21 (discussing PX-331). This letter does not mention the '322 patent which issued over a year later, but instead lists the '115 patent (which has distinct claims from the '322 patent) as one of 14 patents. PX-331 at 2. While three patents were attached to the document, the '115 patent was not, suggesting that it was not one of the more important ones. *Id.* at 3-87. Columbia’s allegation of knowledge of infringement rests merely on the surmise that Norton could have obtained a copy of the '115 patent from the United States Patent and Trademark Office (PTO) upon receipt of the letter. Trial Tr. at 396:10-21. And Columbia does not allege that it ever told Norton that it *infringed* the '115 patent before suing. At best, Columbia only identified evidence that Norton was told that the '115 patent existed, but failed to provide any evidence that Norton knew or should have known it infringed the '115 patent. This evidence also fails to substantiate that Norton knew of the '322 patent, let alone that Norton knew or should have known it infringed it or that Columbia ever told Norton it allegedly infringed pre-suit. Even so, mere knowledge of the '322 patent, or knowledge of that acts alleged to constitute infringement, is insufficient to support inducement. *DSU Medical Corp.*, 471 F.3d at 1305; *Manville Sales Corp. v. Paramount Sys., Inc.*, 917 F.2d 544, 553 (Fed. Cir. 1990). Columbia provided no pre-suit evidence that Norton intended to infringe the '322 patent.

There is also insufficient evidence that Norton intended to infringe the '322 patent *after* Columbia filed suit. Norton first learned of the '322 patent after the lawsuit was filed, when Columbia sent a letter stating its belief that the '322 patent is “directly relevant to the products

identified in the complaint.” PX-22 at 1. But Columbia again failed to provide any evidence substantiating that Norton had a specific intent to induce infringement. *ZUP*, 229 F. Supp. 3d at 454 (recognizing that “mere knowledge of possible infringement by others does not amount to inducement; specific intent and action to induce infringement must be proven.”) (quoting *Warner–Lambert Co. v. Apotex Corp.*, 316 F.3d 1348, 1363 (Fed. Cir. 2003)).

Instead, the record evidence reflects just the opposite—Norton’s reasonable belief of non-infringement from the start of litigation through the end of trial. *See* Dkt. 251 (judgment of non-infringement of all asserted claims according to parties’ joint request); *Trustees of Columbia Univ. in City of New York v. Symantec Corp.*, 811 F.3d 1359, 1371 (Fed. Cir. 2016) (Federal Circuit upholding judgment of non-infringement for four of six asserted patents); *see Acantha LLC v. DePuy Synthes Sales Inc.*, 406 F. Supp. 3d 742, 760 (E.D. Wis. 2019) (“[I]t would be difficult to conjure up a defense which would be more ‘reasonable’ than one expressly adopted by a federal judge.”) (citation omitted); *see also* Dkt. 1204-2 (Allen charge provided to jury that deliberated for more than three days before reaching a verdict). Moreover, Norton has sold the SONAR/BASH feature in Accused Products since 2009, yet Columbia did not alert Norton of its infringement contention until filing suit in December 2013—two years after the ’115 patent issued on December 6, 2011. Trial Tr. 1433:17-22.

In short, this case has none of the hallmarks necessary to show Norton had the requisite mental state for induced infringement, and the evidence strongly establishes the opposite: Norton has at all times, including the present, been firmly convicted that SONAR/BASH does not infringe when used by its customers. Judgment as a matter of law of no inducement should be entered.

C. The Court Should Grant Judgment As A Matter Of Law On Columbia's Contributory Infringement Claims

The jury determined that Norton indirectly infringed claims 2, 11, and 27 of the '322 patent by contributing to its customers' infringement. Dkt. 1206 at 2. The Court should enter judgment as a matter of law of no contributory infringement because no reasonable jury could have reached this conclusion on the record evidence.

First, judgment as a matter of law of no contributory infringement is appropriate because, as explained with induced infringement, Columbia did not present sufficient evidence upon which a reasonable jury could have relied to find direct infringement. *In re Bill of Lading Transmission & Processing Sys. Pat. Litig.*, 681 F.3d 1323, 1333 (Fed. Cir. 2012) (recognizing there can be no "contributory infringement without an underlying act of direct infringement") (citation omitted); *see supra* at Sections III.A and III.B.

Second, Columbia failed to present any evidence upon which a reasonable jury could have found that Norton had the requisite knowledge of patent infringement, as described above regarding induced infringement. *Commil USA, LLC v. Cisco Sys., Inc.*, 575 U.S. 632, 639 (2015) ("contributory infringement requires knowledge of the patent in suit and knowledge of patent infringement."); *see supra* Section III.B.

Third, Columbia has failed to present sufficient evidence upon which a reasonable jury could determine that the Accused Products have no substantial non-infringing uses. Columbia's only evidence on the question of substantial non-infringing uses was Dr. Bailey's conclusory statement that no such non-infringing uses existed. Trial Tr. at 1230:7-1231:5 (Q. "Does SONAR/BASH have any substantial noninfringing uses?" A. "No." Q. "How do you know that?" A. "Well, Norton hasn't been able to provide any, and I can't come up with a way of using SONAR/BASH to do anything that's not infringing."). Yet the record evidence establishes that

more than 25% of people who purchased the Symantec Endpoint Products accused of infringement turned off SONAR/BASH so that the accused functionality did not run on their system. *Id.* at 1641:21-1642:5, 1235:15-1236:14. Such evidence shows that the Accused Products *do* have the simplest substantial non-infringing use conceivable, shutting the accused functionality off completely. *See In re Bill of Lading*, 681 F.3d at 1338 (finding no contributory infringement where product had alternative uses even if “practicing the patented method may be the most logical or useful purpose” for the products).

Moreover, Columbia’s expert Dr. Bailey provided only superficial conclusions—absent any underlying evidence or explanation—that Norton infringed under the theory of contributory infringement. Trial Tr. at 1228:18-1231:4. At bottom, Dr. Bailey’s testimony was largely a recitation of the standard for contributory infringement, a statement that SONAR/BASH was important, and that the Accused Products are sold with SONAR/BASH. *Id.* No reasonable jury could have found contributory infringement given this failure of proof and superficial analysis. *Whitserve, LLC*, 694 F.3d at 24 (“[G]eneral and conclusory testimony” by experts “is not enough to be even substantial evidence in support of a verdict.”).

D. The Court Should Grant Judgment As A Matter Of Law On Willful Infringement

The jury found that Norton’s infringement of the ’115 and ’322 patents was willful. Dkt. 1206 at 4. However, no reasonable jury could have concluded that Columbia provided legally sufficient evidence to support willful infringement, and no reasonable jury could have concluded that Norton knew its actions constituted infringement of an asserted claim or that Norton made itself willfully blind to its infringement of the asserted claims. *See Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 579 U.S. 93, 104-05 (2016).

For at least the reasons explained above with respect to the knowledge and intent requirements of indirect infringement, no reasonable juror could have concluded that Columbia met its burden for willful infringement. *See supra* Section III.B. Here too, mere knowledge of the patent is not legally sufficient to show willfulness. *See Ajinomoto Co., Inc. v. Archer-Daniels-Midland Co.*, 228 F.3d 1338, 1351-52 (Fed. Cir. 2000) (alleged infringer’s knowledge of asserted patent, without more, insufficient to support a conclusion of willfulness).

Columbia also did not advance a theory that Norton willfully copied Columbia’s products, because Columbia had no products on the market to copy. On the contrary, Norton independently designed and sold SONAR/BASH in Accused Products as early as 2009—years before Columbia contacted Norton regarding the ’115 and ’322 patents (which issued on December 6, 2011 and December 3, 2013, respectively, long after Norton introduced SONAR/BASH to the market). Trial Tr. 1433:17-22; *see* Section III.B.

Also missing is sufficient evidence upon which a reasonable jury could have relied to conclude that Norton was willfully blind by taking deliberate action to avoid learning of infringement. The Federal Circuit has determined that even defendants that are reckless (i.e., those that “know[] of a substantial and unjustified risk of [] wrongdoing”) or negligent (i.e., those who “should have known of a similar risk but, in fact, did not”) cannot be found to have had knowledge required for willful blindness absent something more. *Global-Tech*, 563 U.S. at 769-70; *see* Section III.B. Here, Columbia’s willful blindness allegations rely on Mr. Laffoon’s deposition testimony that he did not read the ’115 and ’322 patents or instruct anyone at Norton to design around them. *See* Laffoon Dep. Tr. at 67:2-12, 67:18-20, 67:24, 69:6-15, 69:16-18; Trial Tr. at 2687:8-24. But Mr. Laffoon is not an attorney, and like most engineers he does not analyze patents in the ordinary course of his duties. Laffoon Dep. Tr. at 67:2-12, 67:18-20, 67:24, 69:6-15, 69:16-

18; *see* Trial Tr. at 841:7-19, 871:25-872:6 (Dr. Keromytis admitting that he did not do a technical analysis of the '643 patent or read the claims of the '115 and '322 patent), 676:10-21 (Dr. Stolfo testifying that he doesn't recall reading the '643 claims at the time of his deposition).

Mr. Laffoon also did not testify that it is Norton's corporate policy to turn a blind eye to patents of third-parties, or that this was Norton's policy before Columbia filed suit. Mr. Laffoon simply stated in 2019—six years after the lawsuit was filed—that Norton had not made an effort to design around the patents-in-suit. Laffoon Dep. Tr. at 67:2-12, 67:18-20, 67:24, 69:6-15, 69:16-18. This Court has granted JMOL of no willful infringement under such circumstances, and should do so here. *TecSec, Inc. v. Adobe Inc.*, No. 1:10-CV-115, 2019 WL 1233882, at *1-3 (E.D. Va. Mar. 14, 2019) (granting JMOL of no willful infringement in finding that defendant's "continued sale of the infringing product without removing its infringing capability is merely typical infringement behavior that is not a proper basis for enhanced damages"); *see also VLSI Tech. LLC v. Intel Corp.*, No. CV 18-966-CFC, 2019 WL 1349468, at *2 (D. Del. Mar. 26, 2019) (dismissing willful blindness where the sole basis was a "corporate policy forbidding its employees from reading patents held by outside companies or individuals"). Moreover, the record does not show that Norton subjectively believed there was a high probability it infringed, but instead suggests a strong belief of noninfringement, a belief strongly supported by this Court's having originally entered judgment of *noninfringement* in Norton's favor. *See supra* Sections III.A and III.B.

Thus no reasonable jury could have concluded that Norton is liable for pre-suit willful infringement. Columbia presented no evidence on which a reasonable jury could rely to find that Norton engaged in any "misconduct beyond typical infringement"—a course of conduct held insufficient to support willfulness. *Halo Electronics*, 579 U.S. at 110. And no reasonable jury could have concluded that Norton is liable for post-complaint willful infringement because

Columbia provided no evidence that Norton deliberately intended its actions to constitute infringement of the asserted claims after this lawsuit was filed.

E. The Court Should Grant Judgment As A Matter Of Law On Columbia's Claim For Damages For Infringement Of The '115 and '322 Patents

1. There Was Insufficient Evidence Upon Which A Reasonable Jury Could Return A Verdict Of Infringement And For Damages For Sales Outside The United States

The majority of the damages the jury awarded were for sales to customers located outside the United States, and its award was based on Columbia's contentions that the accused products were (1) made in the U.S. and (2) distributed from the U.S.⁵ Dkt. 1206 at 4-5. The Court should set aside that verdict and enter judgment as a matter of law of no infringement and so no damages for sales to customers located outside of the United States for two reasons. First, there is no evidence upon which a jury could reasonably return a verdict that usage of the accused products by customers outside of the United States infringes or substantially infringes within the United States. Second, there is no evidence upon which a jury could reasonably return a verdict that products purchased by customers outside the United States were made in the United States or distributed from the United States.

Norton maintains its objections to both the presentation of evidence pertaining to sales to customers located outside of the United States and the jury instruction regarding damages for sales outside of the United States, and incorporates its arguments of those issues as if set forth fully herein. Dkt. 375 at 3-4, 13-18; Dkt. 1048, 1048-1 at 24-25. Those sales cannot be the basis for a finding of infringement or resulting damages because the Patent Act is "focuse[d] on *domestic*

⁵ The jury found that Columbia did not prove that Norton's sales to foreign customers were sales that substantially occurred in the United States. Dkt. 1206 at 5.

conduct.” *WesternGeco LLC v. ION Geophysical Corp.*, 138 S. Ct. 2129, 2137-38 (2018) (emphasis added); *see also Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437, 453-56 (2007).

a. Usage of the Accused Products By Customers Located Outside the United States Cannot Support Direct Infringement “Within” the United States

Columbia contends that Norton’s customers located outside the United States directly infringe the Asserted Claims when they download, install, and run the accused products. Trial Tr. at 1227:3-20. But 35 U.S.C. § 271(a) only refers to infringement “within the United States.” Foreign customers’ usage of the accused products cannot be “use ... within the United States” to support direct infringement.

Columbia’s expert Dr. Bailey admitted on cross-examination that, for the method claims in the asserted patents (PX-830 at claim 2; PX-831 at claim 2), foreign customers perform all steps of the method *in the foreign country* (and therefore *outside* the United States). Trial Tr. at 1314:1-8. This alone warrants judgment for Norton as a matter of law for the method claims. *Meyer Intell. Properties Ltd. v. Bodum, Inc.*, 690 F.3d 1354, 1371 (Fed. Cir. 2012) (“[D]irect infringement of a method claim requires that each of the claimed steps are performed within the United States”); *NTP, Inc. v. Rsch. In Motion, Ltd.*, 418 F.3d 1282, 1318 (Fed. Cir. 2005) (“[A] process cannot be used ‘within’ the United States as required by section 271(a) unless each of the steps is performed within this country”), *abrogated on other grounds by Zoltek Corp. v. United States*, 672 F.3d 1309, 1323 (Fed. Cir. 2012).

Dr. Bailey further admitted that the asserted system claim (PX-831 at claim 27) would not be practiced unless and until a customer located outside the United States installed the Accused Products on his or her foreign computer. Trial Tr. at 1316:18-25. But “[t]he use of a claimed system under section 271(a) is the place at which the system as a whole is put into service, i.e., the place where control of the system is exercised and beneficial use of the system obtained.” *NTP*,

418 F.3d at 1317. Because foreign customers complete the system outside of the U.S., they do not use the system “within” the U.S. as required by 35 U.S.C. § 271(a).

Finally, claim 11 of the ’322 patent is a computer-readable medium claim. Dr. Bailey admitted that the accused products could not infringe unless and until they were stored on a non-transitory computer readable medium. Trial Tr. at 1317:1-24. Norton, however, does not sell hard drives or computers. *Id.* at 1317:25-1318:2. Although Norton makes “golden disks” or master copies of the accused SONAR/BASH software, these golden disks do not create a basis for patent liability. Columbia’s damages expert Dr. Sullivan admitted that for the accused Norton consumer products, the design and development that led to the initial release of those products was completed before the ’115 and ’322 patents issued. *Id.* at 1838:16-1839:3. Because Norton created the original golden disks before the patents issued, they are non-infringing as a matter of law. *Welker Bearing Co. v. PHD, Inc.*, 550 F.3d 1090, 1095 (Fed. Cir. 2008) (“The patentee may of course obtain damages only for acts of infringement after the issuance of the patent.” (alterations and citation omitted)); *see* Section III.A.

Dr. Bailey also explained that the golden disks themselves were not installed onto customer computers. Trial Tr. at 1321:8-13. Rather, the golden disks were used to make copies of the software, and it is the *copy* of software made from the golden disks that is installed on customer computers. *Id.* at 1224:14-24, 1320:14-1321:13; *see also* Brennan Dep. Tr. at 9:14-10:15, 59:16-21 (discussing manufacture of physical copies of software outside of the United States). This case is very close to the facts of *Microsoft Corp. v. AT&T Corp.*, in which the Supreme Court held that copies of Windows that were generated by third parties outside the United States were not “supplied from the United States.” 550 U.S. 437, 453 (2007). The Court found that the software copies produced outside the United States did not fall within §271(f)’s scope, and that a single act

of supply from the United States could not be converted “into a springboard for liability each time a copy of the software is subsequently made abroad and combined with computer hardware abroad for sale abroad.” *Id.* at 456 (alterations omitted). Yet that is exactly what Columbia alleged at trial. Trial Tr. at 1223:21-1224:24 1724:17-1725:10, 1728:23-1729:13, 1735:13-1736:3. Thus, under *Microsoft*, the golden disks cannot provide a basis for direct infringement based on sales to customers located outside of the United States, and judgment on this theory should be entered for Norton. *See Microsoft*, 550 U.S. at 453-56 (rejecting infringement claim where allegedly infringing products “were not themselves supplied from the United States”).

b. There Was Insufficient Evidence That Products Purchased By Customers Outside the United States Were Made In or Distributed From the United States

The Court should grant judgment as a matter of law of no infringement and so no damages for sales to customers located outside the United States. The jury returned a verdict including a royalty for sales to customers located outside the United States on the basis that the accused products were (1) made in the United States and (2) distributed from the United States. Dkt. 1206 at 4-5. But “the entirely extraterritorial production, use, or sale of an invention patented in the United States is an independent, intervening act that, under almost all circumstances, cuts off the chain of causation initiated by an act of domestic infringement.” *Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.*, 711 F.3d 1348, 1372-73 (Fed. Cir. 2013).

The Court should grant judgment as a matter of law under *Power Integrations*. As discussed above in Section III.E.1.a., foreign customers’ usage of the accused products occurs entirely abroad. Further, foreign customers install foreign-made copies of software. Norton customers can either install the software from a CD or download the software from a foreign content delivery network (CDN). Trial Tr. at 1227:21-1228:1, 1722:9-21. The evidence at trial showed that foreign customers purchased and installed foreign-made copies of the software. *Id.*

at 1318:16-1320:13 (foreign customers downloading replicas of the software from a server of the content delivery system located abroad); Brennan Dep. Tr. at 41:11-41:18 (customer does not get physical product from Culver City), 9:14-10:15, 59:16-21 (discussing manufacturing lines in the Czech Republic and Singapore), 75:11-75:25 (customers only have access to the sales channel for their specific location).

Dr. Bailey admitted that the software delivered through the content delivery network is “made” or stored on a server outside the United States, near the location of the download. Trial Tr. at 1318:16-1319:7, 1319:19-1320:13. Indeed, the “point of the content delivery network is to keep [the] servers relatively close to users who want to download software from them.” *Id.* at 1320:10-13. Dr. Bailey also admitted that when a customer located outside of the United States downloads software from the content delivery network, they download a foreign “replica” of the software. *Id.* at 1318:16-1320:13. Thus, customers located outside of the United States downloading software from content delivery network cannot be proof of infringement in the United States because the content delivery network servers themselves are located abroad. *See Power Integrations*, 711 F.3d at 1372 (explaining that damages must be “rooted in [the defendant’s] activity in the United States” (citation omitted)). Regardless of whether customers located outside the United States purchased physical copies or downloaded the Accused Products, those foreign-made copies and foreign installations of the Accused Products cannot directly infringe. *Microsoft*, 550 U.S. at 453-56.

Columbia contends that the royalty base should include sales to customers outside the United States because the design and development of the accused products and creation of the golden disks occur in the United States. Trial Tr. at 1735:13-1736:3. The Supreme Court in *Microsoft* rejected infringement (and therefore any resulting damages) under this theory, where

the defendant designed the accused software and generated master copies in the United States and then sent those master copies abroad to make copies of the software installed on foreign users' computers. *Microsoft*, 550 U.S. at 445-46, 453 (rejecting infringement claim where allegedly infringing products "were not themselves supplied from the United States"). Because the copies of software installed on foreign customers' computers were not *themselves* supplied from the U.S., those installations do not infringe as a matter of law, and Columbia is not entitled to damages for these products.

During trial, Columbia advanced a theory that Norton's testing of its own products directly infringed the Asserted Claims. Trial Tr. at 1225:6-13, 1226:10-18, 1834:20-1839:3. But Columbia is not entitled to damages where "[t]he damages base [is] not tailored to any alleged internal use of the claimed methods" such as through sales of the accused products. *Packet Intel. LLC v. NetScout Sys., Inc.*, 965 F.3d 1299, 1315 (Fed. Cir. 2020), *cert. denied*, 141 S. Ct. 2521 (2021). Moreover, "[e]ven if" Norton's internal use "of the patented method drove sales for the [accused] products, that fact would only justify instances of internal use being counted as part of the royalty base." *Id.* Columbia failed to present any evidence at trial tailoring the foreign sales of the Accused Products to Norton's internal testing. Although Dr. Sullivan testified that Norton's internal testing enabled the global sales of the Accused Products, that testimony did not properly limit the royalty base to Norton's internal use. Trial Tr. at 1834:20-1839:3. Thus, foreign sales of the Accused Products cannot be part of the royalty base. Further, Dr. Bailey admitted that he did not know whether the accused SONAR/BASH functionality was tested in China or in the United States. Trial Tr. at 1321:14-24. Thus, the jury had no evidence to support a verdict that Norton's products sold outside the United States were ever tested inside the United States.

To the extent Columbia contends that the submissions from customers outside the United States contribute to the design and development of the accused products in the United States, the development of the original accused products occurred before the patents issued and cannot support Columbia's damages claim. Trial Tr. at 1733:23-1734:7; *Welker*, 550 F.3d at 1095. To the extent Columbia contends that Norton uses submissions from customers outside the United States to create an updated decision tree, (1) any such use stopped more than five years ago (*see* Trial Tr. at 1307:23-1308:7), and (2) any use of the updated decision trees by foreign customers would occur entirely abroad, after the foreign customer downloads and installs the updated decision tree on their foreign computer. As discussed above, such usage by foreign customers cannot support direct infringement. *Meyer*, 690 F.3d at 1371; *NTP*, 418 F.3d at 1318.

In short, there is no evidence upon which a jury could reasonably return a verdict for damages for Norton's sales to customers located outside the United States.

2. There Was Insufficient Evidence Upon Which A Reasonable Jury Could Return Damages For Infringement Of The '115 and '322 Patents

The jury returned a verdict of \$185,112,727 as a reasonable royalty for Norton's alleged past infringement through Feb. 28, 2022. Dkt. 1206 at 4. The Court should enter judgment as a matter of law of no damages for the alleged infringement because Columbia failed to present legally sufficient evidence to support its damages claims.

"The patentee bears the burden of proving damages." *Whitserve, LLC*, 694 F.3d at 26; *see also Transclean Corp. v. Bridgewood Servs., Inc.*, 290 F.3d 1364, 1370 (Fed. Cir. 2002). "[D]amages awarded for patent infringement 'must reflect the value attributable to the infringing features of the product, and no more.'" *CSIRO v. Cisco Sys., Inc.*, 809 F.3d 1295, 1301 (Fed. Cir. 2015) (quoting *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1226 (Fed. Cir. 2014)). To determine this value, parties can calculate a reasonable royalty based on a hypothetical negotiation

between the patentee and alleged infringer, which “attempts to ascertain the royalty upon which the parties would have agreed had they successfully negotiated an agreement just before infringement began.” *Lucent Techs. Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1324 (Fed. Cir. 2009) (citing *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116 (S.D.N.Y. 1970)). Damages cannot be based on “speculation or guesswork.” *Id.* at 1335. Nor can they be based on expert testimony that is economically unsound or unreliable. *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 67 (Fed. Cir. 2012) (“A damages theory must be based on ‘sound economic and factual predicates.’” (quoting *Riles v. Shell Exploration & Prod. Co.*, 298 F.3d 1302, 1311-13 (Fed. Cir. 2002))); *see also Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1315-18 (Fed. Cir. 2011). “[C]ourts must be proactive to ensure that the testimony presented—using whatever methodology—is sufficiently reliable to support a damages award.” *CSIRO*, 809 F.3d at 1301.

Columbia failed to present sufficient evidence under this test to support its damages claims. Columbia relied on two experts to support its damages demand. Dr. Cole testified first with respect to apportionment; Dr. Sullivan then relied on Dr. Cole’s apportionment analysis in providing his damages opinion. Neither expert’s opinion was supported by the evidence adduced at trial. Dr. Cole admitted on cross-examination that several of the assumptions he relied on in forming his opinions were incorrect, including that the patented technology was “widely adopted” (Trial Tr. at 1553:7-1557:25) or that it would have served as a product differentiating feature from 2009-2015 (*id.* at 1571:15-1576:8). Moreover, Dr. Cole provided an apportionment analysis twice in this case relating to the asserted patents, first in 2014 and then in 2019. *Id.* at 1583:25-1584:18. Dr. Cole testified that he changed his apportionment analysis (and the resulting conclusions) based on differing instructions he received from different counsel in 2014 and 2019. *Id.* at 1584:10-20. In

2014, Dr. Cole found that the “upper limit” of the value of malware protection to Norton’s products was 70%. *Id.* at 1584:25-1586:5. In 2014, Dr. Cole apportioned the value of malware as between 53% and 70% for the accused consumer products, and as 60% for the Symantec Endpoint products. *Id.* at 1602:24-1603:19. In 2019, Dr. Cole changed those numbers to 60-95% for the consumer products and 75% for the Symantec Endpoint products. *Id.* at 1604:17-1604:23. Dr. Cole explained that counsel gave him “two different assignments,” which is why he wound up with two different numbers. *Id.* at 1605:11-18. Dr. Cole never adequately explained why his numbers changed from 2014 to 2019 beyond identifying the 2019 deposition testimony of a Norton witness testifying about customers’ contemporaneous perception of the products. *Id.* at 1493:20-1494:15, 1605:5-18. Dr. Cole’s remaining apportionment analysis relied on the first step, apportioning the value of malware, which was speculative and unreliable.

Moreover, Dr. Cole admitted that his apportionment analysis was qualitative, not quantitative. Trial Tr. at 1483:11-1484:4, 1470:6-18. Much of Dr. Cole’s “qualitative” analysis was based on his short tenure at McAfee from 2009-2010, resulting in a complete lack of corroborating evidence beyond Dr. Cole’s say-so. *Id.* at 1631:8-1634:12. That kind of “qualitative testimony” is “insufficiently reliable” unless it is “anchored to a quantitative market valuation.” *CSIRO*, 809 F.3d at 1302. But the only quantitative evidence Dr. Cole identified demonstrated that the accused SONAR/BASH functionality only accounted for 1% of the blocks performed by the accused products (Trial Tr. at 1470:19-1471:17) and was either disabled or not installed by at least 25% of enterprise customers (*id.* at 1641:21-1642:20). Thus, the only quantitative evidence of record undermines Dr. Cole’s qualitative opinions. Dr. Cole’s apportionment analysis is speculative, economically unsound and unreliable. And because Dr. Sullivan’s damages analysis relies on Dr. Cole’s apportionment analysis, that unreliable analysis taints the entirety of Dr.

Sullivan’s analysis. See, e.g., *Gopalratnam v. Hewlett-Packard Co.*, 877 F.3d 771, 789 (7th Cir. 2017) (concluding that second expert’s testimony was unreliable because it incorporated and relied on first expert’s unreliable testimony); *Sims v. Kia Motors of Am., Inc.*, 839 F.3d 393, 404-05 (5th Cir. 2016) (same). Columbia thus failed to present legally sufficient evidence to support its damages claims, and the Court should grant judgment as a matter of law.

IV. CONCLUSION

For the foregoing reasons, Norton respectfully requests that the Court grant Norton's Motion for Judgment as a Matter of Law.

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Respectfully submitted,

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